

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An integrated device, comprising: a substrate wherein a buried layer and an epitaxial region have been formed, and an isolation structure adapted to define a plurality of isolation wells for integrating the components of the integrated device therein, said isolation structure comprising plural dielectrically insulated trenches, each trench having an open bottom, and each trench having only a lining of oxide and a filling of a completely conductive material to form a contact region that is in direct contact with one of the substrate and buried layer.

2. (Original) The integrated device of claim 1 wherein said dielectric trenches are formed at the edges of the isolation wells in contact with said buried layer.

3. (Original) The integrated device of claim 1 wherein said dielectric trenches are formed in intervening areas between adjacent isolation wells in contact with said substrate.

4. (Previously Presented) The integrated device of claim 2 wherein the plurality of trenches are in contact with said buried layer and are located at each edge of each isolation well.

5. (Original) The integrated device of claim 3 wherein each intervening area between adjacent isolation wells includes a plurality of trenches in contact with said substrate.

6. (Original) The integrated device of claim 1 wherein said plurality of trenches comprise dielectric regions surrounding the contact regions.

7. (Original) The integrated device of claim 1, comprising active or parasitic components integrated in intervening regions between each of the plurality of trenches.

8. (Original) The integrated device of claim 1 wherein said isolation structure contacts buried regions of high- or low-voltage active components of the integrated device.

9.-16. (Cancelled)

17. (Previously Presented) An isolation trench structure, comprising:
a substrate having a buried layer and an epitaxial region formed therein;
a plurality of isolation wells formed in the substrate; and
a dielectrically insulated trench formed between each of the isolation wells and located at the edges of the isolation wells, each trench having an open bottom and each trench comprising a central contact region surrounded by insulating dielectric regions, each central contact region formed of electrically conductive material that is in direct contact with the buried layer.

18. (Cancelled)

19. (Original) The structure of claim 17 wherein the central contact region comprises doped polysilicon material.

20. (Previously Presented) An isolation trench structure formed in a semiconductor substrate having a buried region, comprising:
an isolation structure formed in the substrate to define a plurality of isolation wells, the isolation structure comprising a plurality of trenches, each trench having an open

bottom and sidewalls, and each trench having only a single insulating dielectric material to define a central cavity having an open bottom, and a conductive material filling the central cavity and in contact with one of either the substrate and the buried region to provide a conductive path to the substrate surface.

21.-23. (Cancelled)

24. (Currently Amended) An integrated device, comprising:

a substrate having a buried layer and an epitaxial region formed therein, and an isolation structure adapted to define a plurality of isolation wells for integrating the components of the integrated device therein, the isolation structure comprising plural dielectrically-insulated trenches, each trench having an open bottom and each trench filled with a completely conductive material to form a contact region that is in direct contact with one of the substrate and the buried layer, the conductive material and substrate and buried layer further doped with a doping material of a first conductivity and first concentration, and the buried layer doped with a second dopant of opposite conductivity than the first dopant and at a concentration higher than the concentration of the first dopant to compensate for the first dopant.

25. (Currently Amended) An isolation trench structure formed in a semiconductor substrate having a buried region, comprising:

an isolation structure formed in the substrate to define a plurality of isolation wells, the isolation structure comprising a plurality of trenches, each trench having an open bottom to define a central cavity and lined with a single insulating dielectric material to define a central cavity and completely conductive material filling the central cavity and in contact with one of either the substrate and the buried region to provide a conductive path to the substrate surface, the conductive material, buried region, and substrate doped with a first-type dopant of a first concentration, and the buried region doped with a second-type dopant at a second concentration to compensate for the first-type dopant.

26. (Previously Presented) An isolation trench structure, comprising:
a substrate having a buried layer and an epitaxial region formed therein;
a plurality of isolation wells formed in the substrate; and

a dielectrically-insulated trench formed between each of the isolation wells and located at the edges of the isolation wells, each trench having an open bottom and each trench comprising a central contact region surrounded by insulating dielectric regions, each central contact region formed of electrically-conductive material that is in direct contact with the buried layer, the isolation wells and conductive material doped with a first-type dopant at a first concentration and the isolation wells doped with a second-type dopant of a second concentration that is higher than the first concentration of the first-type dopant.